Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

MAY 2 1 1930
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 3 1930

REPORT FOR THE WEEK ENDING MAY 3, 1930.

PENDLETON:

The field work the past week has consisted chiefly of harrowing to kill the small weeds which are starting. Considerable time has been spent in hoeing weeds in the alleys and varietal trials.

The winter wheat is growing rapidly, much of it is now knee high. The winter wheats will soon be in the boot stage. Spring grains are growing nicely but not so fast as the winter grains. The permanent roots have started to form on the spring grains. In dry seasons in this section the spring grains are brought to maturity on the temporary root system. The soil sometimes dries out so fast that the permanent roots do not have a chance to develop.

Showers last week totaled .66 inch. The rains in the spring are always followed by several days of cold winds. The alfalfa, clovers, and grasses have emerged with good stands.

Maximum temperature 79; minimum 29; precipitation, .66 inch.

HAVRE:

The past week was a favorable one both for field work and growing vegetation. The seeding of all small grains was completed on the rotations and variety tests. Commercial fields on the station are practically seeded. Barley seeded last week is emerging. Early seedings are making rapid growth. The delay in seeding this spring with a cultivation just ahead of the drill has apparently resulted in a very clean seedbed.

With a maximum temperature of 83 degrees on the 2nd, trees and shrubs are leafing out quite rapidly. Some of the plums, the yellow currant, and flowering plum are blooming. Spirea Arguta is blooming on the south side of the building.

Domestic and range grasses continue rapid growth. Alfalfa is also growing where it was not injured during the winter. Fields under irrigation that were not cut a third time last year show much more vigorous growth than fields that were cut a third time.

Maximum temperature 83; minimum 36; precipitation, .05 inch.

JUDITH BASIN:

Temperatures for April were relatively high with a maximum of 78 degrees on the 7th, and minimum of 28 on the 16th. The mean maximum of 60 was exceeded only in 1910 and 1915. The mean minimum of 35 was exceeded only in 1915. Precipitation amounted to .85 inch, which is .37 inch short of the twenty-year average for this month. The total precipitation for the first four months of 1930 is .42 inch below normal.

With the temperature ranging above the normal, combined with frequent showers, good growing weather was experienced during the week. Alfalfa, crested wheat grass, and winter grains have been making rapid growth with soil moisture conditions very favorable to date.

Pure seed plots, increase fields, peas and grain hays have been seeded during the week. The planting of experimental potato plots was also completed.

Conifers received from Mandan were planted in the replacements and new blocks. Cows were placed on the experimental pastures May 1.

Maximum temperature 78; minimum 34; precipitation .13 inch.

HUNTLEY:

Showers during the week have brought the total precipitation for April up to 1.86 inches which is .61 inch above the average for the month. Good growing weather has prevailed throughout the week and all spring sown crops with the exception of sweet clover and grasses are up. Due to the uneven percolation of the moisture into some of the rough, cloddy seedbeds emergence has been irregular and many of the stands look ragged.

The growth of alfalfa and bromegrass on the pastured plots is still much behind these crops in the unpastured plots, and it seems doubtful if the pasturing experiments on the perennial crops can be started on the average date. Winter rye in the annual crop pastures is ready for grazing and the pigs are being placed on the plot to-day.

The preparation of land for corn and other late crops has been continued throughout the week.

Maximum temperature 85; minimum 37; precipitation, .58 inch.

SHERIDAN:

A heavy shower of .56 inch, followed before the surface had dried by another light shower of .18 inch, prevented any field work from Monday noon until Thursday noon. This makes the first moisture of consequence falling on the station since field work started this spring, although heavy showers have been received in several nearby localities. This shower was heavy only over a strip from a mile to a mile and a half wide centering on the station. It was accompanied by heavy hail, but no damage resulted.

Spring grain made a good growth during the week, but the stand is poor and uneven on many of the spring plowed plots.

Plowing for corn and late crops was nearly completed. Flax was seeded in the rotations yesterday. Seeding of flax and millet varieties is in progress to-day.

The first few days of the week were fairly cool, but the weather has warmed up considerably to-day.

Maximum temperature 83; minimum 34; precipitation, 1.08 inches.

DICKINSON:

April precipitation amounted to 1.95 inches, or .74 inch above normal for the month. The mean temperature was 47.3 degrees.

Vegetation is about three weeks ahead of its development at this date a year ago. The first blossoms opened in the orchard on April 29, and several of the early flowering varieties of plum are now in full bloom.

Flax was seeded on the rotations April 30. Alfalfa and sweet clover varieties were seeded April 28. Potato varieties were planted May 2 and 3.

Small grains on the rotations have emerged with good uniform stands and with very little difference between tillage methods, since the surface soil on all plots contained a good supply of water.

Maximum temperature 81; minimum 34; precipitation, .22 inch.

MANDAN:

Agronomy

The past week has been favorable for field work. Temperatures have been near normal with one or two very nice days.

Barley was seeded in the rotations, and a small field for feed. Seed blocks of oats and barley were also put in.

Plowing has been started for corn on some of the variety blocks. Wheat is now up to a good stand.

The total precipitation for April was 1.71 inches, or slightly above normal. The total amount since January 1 has been 3.58 inches, compared with the 55-year average of 3.44 inches.
Maximum temperature 78; minimum 33; precipitation, .09 inch.

Cooperative Grazing Experiment

Part of the cattle for the 1930 grazing work have been delivered at the pasture.

Native vegetation has made a good growth. Prairies are now green, and seem to be more advanced than usual at this time of year.

Arboriculture

Sixty-five thousand Northwest poplar cuttings were placed in the nursery the early part of the week. Six thousand rooted poplar cuttings have been planted in field Q for future cuttings.

Lining out of conifer seedling stock has commenced in the conifer nursery.

All roads around nursery fields and test plantings have been cultivated with the duckfoot cultivator drawn by a tractor.

Mandan, continued:

Horticulture

Planting of fruit trees and small fruits in orchard blocks and nursery has been completed.

The first cultivation of the season is now in progress. Warm weather has stimulated weed growth earlier than usual.

Top-working of Hibernal trees in the west field block and Hillside orchard, was completed in the early part of the week.

The newly arrived Fordson tractor has been used most of the week drawing a duck-foot cultivator. The work is being done at a much reduced labor cost, and appears to be in every way satisfactory.

During the week three classes of high school students have visited the station.

Dr. E. G. Booth, Extension Agronomist, North Dakota Agricultural College, in company with County Agent Newcomer, has spent considerable time at the station during the week. He was here conducting an alfalfa seeding demonstration on the Charles Keidel farm near Mandan. Some 35 farmers from various points attended the demonstrations.

BELLE FOURCHE:

The week has been comparatively warm and very favorable to plant growth. A shower of .49 inch precipitation was received April 27, and several light rains fell during the two following days. The surface soil is now well filled with moisture, insuring a good germination of newly seeded crops.

Soil moisture samples taken April 30 show an abundance of moisture to be present in the first 15 to 18 inches of soil on all plots. On plowed continuously cropped plots, there is practically no available moisture in the soil below the first 18 inches. Summer fallowed land is nearly saturated to a depth of 4 feet or more.

Belle Fourche, continued:

All crops have made rapid advancement during the week. Winter rye on corn and sorgo stubble has attained a height of approximately 8 inches, and winter wheat has made a very noticeable improvement. Alfalfa is 6 to 8 inches high, and sweet clover has made much more growth than during the entire previous month. Flax is up, and the stands of small grain on spring plowing are gradually improving. A heavy soil crust is interfering with the emergence of alfalfa and sweet clover, and only about 35 per cent of these two crops are up.

The continuously cropped spring wheat plots, on which seeding has been delayed to control wild oats and weed growth, were duckfooted, harrowed, and seeded. All corn plots, except those to be listed, were duckfooted and harrowed in preparation for planting.

Maximum temperature 84; minimum 37; precipitation, .58 inch.

ARDMORE:

The first part of the week was unsettled with frequent showers, but the amount of rain received at the field station was small. Substantial rains fell in this locality, however. The last few days of the week were warm and dry.

Vegetation continued to show rapid growth. Alfalfa has commenced to show drought injury. Unless rain falls soon the first cutting of hay will be very small.

Field work during the week consisted largely of preparing the fields for corn. All fields to be planted to corn have been duckfooted or disked. Roads were trimmed and alleys and trees were cultivated during the week.

The rainfall for April was nearly normal. The total for the month was 1.93 inches which is .13 below normal.

Maximum temperature 84; minimum 39; precipitation, .40 inch.

ARCHER:

The weather has continued warm and, for the most part, clear. These conditions have been favorable for field work. The maximum temperature was 76 degrees and the minimum 36 degrees. The precipitation amounted to .04 inch with a number of traces. The total precipitation for April was 1.10 inches, which is .77 inch less than the station average.

Work at the station has consisted of seeding sunflowers and corn with the lister, disking and duckfooting corn land. The dates of seeding were made May 1 and the seeding of the varietal plots is in progress. The trees have been cultivated and the dairy herd has been turned out to pasture.

Vegetation generally has made considerable growth. The prairies are green though rather dry. The Northwest poplars are coming into leaf and the plum trees are blooming. The apple trees and gooseberries are about to bloom. If the present threatening weather does not bring frost it is probable that a good crop of fruit will set on the trees.

AKRON:

Beginning last Friday a week ago there was rain in some form each and every day for the next seven days. These rains have helped the agricultural outlook appreciably and have interfered with uninterruped field work.

Winter wheat has started active spring growth and the winter killed spots are now very evident. Many of the rotation plots must present a ragged appearance at harvest time, but the winter wheat variety experiment has come through with uniform stands at least.

Spring seeded small grains are now up and are rapidly covering the ground. Weeds are also emerging so that there promised to be a race between the spring grains and the weeds for supremacy. Germination of these spring sown grains was delayed during the fore part of April because of dry surface soil.

Akron, continued:

The staking out and the trimming of the rotation roadways has held attention during the week with about two-thirds of the roadways opened out by this week-end. Other work consisted of plowing the rotation corn and sorghum plots, the spike-tooth-harrowing of the sheep rotation corn fields and the rate-and-spacing corn project ground, and the cultivation of the rotation alley-ways. Teams were making final preparation of the rotation corn plots for seeding, but were driven from the field about ten o'clock by a heavy shower which has persisted the most of the remainder of the day.

The second date seeding of spring sown small grains was made on the 2nd. The first date seeding is emerged with the exception of the Safflower.

The damp, cloudy weather has interfered with the blossoming of the orchard trees. Foundation shrubbery is now out in full leaf except those on the north sides of the buildings where they are just breaking into leaf.

Dr. D. W. Robertson, Plant Breeder for the State College, and Mr. T. G. Stewart, Extension Agronomist, visited the station on Tuesday. Professor George E. Morton, Head of the Animal Husbandry Department of the State College, was a station visitor Wednesday, April 30.

Maximum temperature 76; minimum 40; precipitation, 1.18 inches.

April passed with a little more than the average precipitation.

NORTH PLATTE:

The early part of the week was a continuation of the season of damp, cloudy weather which had persisted since the middle of April. The last three days have been bright with strong winds so that rapid drying has taken place.

The April rainfall was 3.54 inches at the table guage. This is an excess of 1.48 inches over the North Platte normal for April, and makes an accrued excess of .74 inch since January 1. Alfalfa and grain crops continue to make rapid growth.

North Platte, continued:

No killing frost has occurred since April 3. Fruit seems to be well on its way toward a complete escape from frost injury.

Crops field day at this station is scheduled for June 26, following the American Society of Agronomy summer meeting at Lincoln, June 23-24.

COLBY: (Report for the two weeks ending May 3, 1930.)

The last two weeks have been cloudy and rainy for the most part, which made conditions favorable for crop growth. The spring small grains are just getting nicely started growing, but the winter wheat has shot up considerably so that it is now from six to twelve inches in height. The summer fallow wheat, in particular, looks very thick. Rye is beginning to head. Pastures are luxuriant for this time of the year.

The spring plowing for corn was done yesterday. It has been well packed by the heaviest rain of the season, to-day. It was very wet when plowed and is soaked now. About half of the plots were trimmed this morning before the rain started.

Weather for April: Maximum temperature 93; minimum 23; precipitation, 2.41 inches. Precipitation, 43-year average, 2.19 inches. Total precipitation January 1 to May 1, 1930, 3.01 inches, 43-year average, 3.92 inches. Precipitation since May 1, 1.00 inch.

GARDEN CITY: (Report for the week ending April 26, 1930.)

A total of .13 inch of rain fell the past week. Wheat is beginning to show new life and now has enough moisture to carry it for a short time without materially suffering from dry weather.

Spring listing for seedbed preparation and fallows was done the past week. Soil works up loose and very friable. Enough moisture is in the ground to germinate weeds well. Weed growth is beginning to start.

Maximum temperature 84; minimum 39.

GARDEN CITY:

Another week of good rains, coming slow enough to soak in well and no run-off until to-day, Saturday, May 3, when we had a total of .86 inch from 9 a.m. to 12 p.m. Wheat is growing nicely. It shows good color, and in the rotation and MC plots where some had begun to turn a pale yellow the poor color has disappeared.

Last spring the roadways were graded with a ditch in the middle. During the past season and winter, water and wind erosion had deepened the grade somewhat. In places it was getting too low for the good of the plots. During the past week a small dam, low in the center, was built of straw and dirt and then covered with woven wire, staked down. To-day, May 3, enough rain fell to cause run-off. The dams held well and caught some soil back of them. We expect to leave these dams in rather permanently. They are so built that tillage implements can be driven over them.

Maximum temperature 82; minimum 43; precipitation, 1.34 inches.

TUCUMCARI:

A shower of .15 inch last night brought the total for the year to .76 inch. During the past week Amarillo, Dalhart, Clovis, and other points east, northeast, and southeast have reported good rains of an inch or more. Wheat in this county continues to deteriorate, with a great acreage now abandoned. Prospects are that a very heavy row crop acreage will be planted, with broomcorn and beans showing the greatest increase over normal planting.

Work the past week has included planting the May 1 date of cotton with the lister in dry, cloddy soil, and miscellaneous clean-up work.

April was the third driest on record and also the warmest, the mean temperature being eight degrees above the long-time average mean.

Maximum temperature 90; minimum 45; precipitation, .18 inch.
Wind velocity, 7.2 miles per hour; evaporation, 2.025 inches.

DALHART:

The weather during the past week was decidedly different from what we have grown accustomed to. Total precipitation during the week just ending was 1.76 inches. The first real rain of the season was on Monday evening and night when a total of 1.49 inches fell. Another rain of .26 inch fell last evening. These rains have changed the crop prospects entirely. Wheat farmers and row-crop farmers alike are feeling jubilant. The rainfall for the year was below normal until the last week of April. A total of 2.53 inches of precipitation was received in April which brought the total precipitation for the first four months of the year to 3.25 inches or approximately normal.

The month of April was the warmest April ever recorded for that month. The mean temperature for April, 1930, was 60 degrees which is seven degrees warmer than the mean. The wind velocity which averaged 6.3 miles per hour for the month was the lowest average ever recorded, and was 2.5 miles per hour less than mean average for April. The evaporation for April was 7.884 inches, being .9 inch more than average. The last killing frost for the year was on the morning of April 3. No earlier date for that has been recorded. In other words, our season is about three weeks advanced from normal. The dry weather previous to seeding of spring grains makes the barley and oats rather late for the season. Rye is heading and wheat will head before long. Furrow wheat on fallow certainly does look good now. Much of the wheat, previous to the rains the last week of April, had put forth but scant height growth and gave evidence of short heads. Probably the earlier seeded wheat was too far advanced to be benefited materially by the rains.

The first date of seeding of cotton was made on the 1st. The ground was a trifle wet. Three varieties were seeded. The orchard, vineyard, and windbreaks were all cultivated during the week. Grass on lawns was large enough to mow for the first time during the week. With the exception of the flowering willows the trees around the buildings are leafed out. Some Chinese elm seed was planted during the week and a few ash seedlings transplanted. Sweet clover seeded during the winter and spring at monthly intervals is all coming up at the same time.

Maximum temperature 84; minimum 44; precipitation, 1.76 inches.
Wind velocity, 6.4 miles per hour; evaporation, 1.627 inches.

BIG SPRING:

Three rains totaling 1.39 inches have fallen during the past week. This, together with that which fell the week previous, makes a total of 2.48 inches since the dry spell. These rains all fell in such a manner that no run-off occurred; as a result the soil is soaked up in good working shape.

The ranchers are rejoicing over the appearance of green grass and weeds in their pastures. The farmers are starting to plant cotton and feed crops.

The May 1 date of seeding of eleven different crops consisting of three varieties of cotton, two of forage sorgos, and six of grain sorghums was made on time. The soil was in good planting shape, so these crops should emerge in a very short time. Other work has consisted of plowing plots and leveling listed plots.

Maximum temperature 89; minimum 52; precipitation, 1.39 inches.

LAWTON:

Wet, cloudy weather prevented any field work the past week. Precipitation recorded during the week was as follows: April 27 - .34 inch; April 28 - 1.72 inches; April 29 - .05 inch; May 2 - .68 inch; May 3 - .83 inch. Total for the week 3.62 inches. Most of the rains came in heavy downpours and were accompanied by high wind velocity.

The first oat heads were showing April 27 and quite an appreciable per cent of the heads were out of the boot by the end of the week. Wheat showed only an occasional head at that time.

Good stands of corn were recorded April 30. Emergence of broom corn and of sorgo on the M.C. plots was recorded May 1 and 3, respectively. Kafir on the listing methods plots also showed good stands May 3. A fairly good stand of sweet clover, seeded in Rotations 133 and 134 March 15, was up May 3. Crab grass will give the crop keen competition. Alfalfa, seeded in rotation 142 March 15, was up to a stand by March 27 and subsequent growth has been fairly good. Increased fields of old alfalfa, although badly thinned out by grass and weeds are rapidly responding to the rains of the last two weeks.

Lawton, continued:

Cotton planted April 16 came up slowly and unevenly, but fairly good stands will likely be obtained.

WOODWARD:

The past week has shown a remarkable response of the wheat crop to belated rains. Wheat that seemed two weeks ago beyond hope now promises to make a fair crop. Some of the greatest injury to wheat resulted apparently not so much from the prolonged drought as from too late pasturing. Many farmers pastured unusually late on the theory that pasturing would diminish the leaf surface and save moisture. Many of the tiny heads just forming were injured or destroyed in the process. Another reason for late pasturing was the small amount of other feed available. The total rainfall over past two weeks has been 2.53 inches. It was well distributed and there was practically no run-off.

The work of the week has been destroying weeds, which are fairly lifting the surface of the ground, planting a great variety of tree seeds, and excavating for basement of new residence.

NOTE:

At 3:15 p.m., May 10, Professor E. C. Chilcott left Washington for Woodward, Oklahoma.

MAY 21 1930
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 10 1930

REPORT FOR THE WEEK ENDING MAY 10, 1930.

HAVRE:

Showers during the past week have somewhat interfered with field work. Precipitation was recorded on four days with a total for the week of .70 inch. A maximum temperature of 83 was recorded on the 3rd, and a minimum of 33 on the 7th, making a range of 50 degrees for the week.

Temperatures have been rather low for rapid growth of spring grain, but have been excellent for grasses. Grain is emerging with very uniform stands. Domestic grasses are making an excellent growth.

During the last three or four days there has been snow in the mountains to the south and to the west. Freezing temperatures occurred in localities not very far distant, but there was no freezing on the station. Shrubbery and fruit trees that have been in bud for ten days or more are now only in partial bloom, and a frost at this time would be very disastrous to the fruit crop. Farmers generally are very optimistic. Seeding is still being done. Part of it now is either on duckfooting or disking. Early seeded grain on fallow is looking very fine over this section of the State.

Visitors during the week included Director F. B. Linfield, of the Montana Experiment Station, Director J. C. Taylor and Mr. Waldo Kidder, of the Montana Extension Service, and Mr. A. J.Dexter, of the publicity department of the college.

Maximum temperature 83; minimum 33; precipitation, .70 inch.

JUDITH BASIN:

Spring field work, which was going forward rapidly, was delayed the last half of the week by snow and rain. The wind velocity for the week was quite high and low temperatures prevailed. Freezing temperatures were recorded on four days during this period but no damage to field crops has been noted.

Most of the spring seeded plots on the rotations have emerged with good stands. Winter wheat has been making rapid growth in Central Montana, but some fields have a decidedly weedy appearance.

Judith Basin, continued:

The moisture received this week came at an ideal time for the replacements and new belts of conifers and deciduous trees recently planted at this station.

Maximum temperature 65; minimum 31; precipitation, .77 inch.

HUNTLEY:

The past week has been cool and generally cloudy with precipitation occurring on five days out of the seven. This precipitation was received in the form of light showers and misty rains which kept things damp but did not do much toward soaking up the ground.

Wheat, oats, and rye have grown rapidly during the last few days but barley and flax seemingly have made little progress. Brome-grass and alfalfa are coming up thickly in the new pasture plantings. The moisture of the last showers softened the crusted soil and the seedlings pushed through to the surface without much difficulty.

Seedbed preparation for corn, sunflowers, beans, and potatoes was completed early in the week and the first two crops were planted. The Dry-Land Garden was also planted.

Maximum temperature 75; minimum 30; precipitation, .20 inch.

SHERIDAN:

A rain of .41 inch the evening of the 3rd, with another rain of .40 inch on the 5th was followed by cold, cloudy weather with a trace of precipitation nearly every day for the remainder of the week. No field work was possible until the afternoon of the 8th. This has made moisture conditions excellent for the present.

A late seeding of a few of the most promising varieties of wheat, oats, and barley was made yesterday, May 9. The spring plowed plots for corn and flax in the rotations were harrowed again and worked down in fairly good condition.

Sheridan, continued:

Sweet clover in Rotation 135 has emerged with a fairly good stand. This seeding was made in March, broadcast on the stubble. A sparse stand had emerged before the recent rains. In other seedings of sweet clover, seeded similarly during the winter and in March, only a few plants have emerged, while other seedings with the drill are emerging with a good stand. The stand of small grain on the spring plowing in the rotations improved considerably during the week, as more of the grain emerged after the rain. Sweet clover is being seeded in nursery rows to-day, May 10.

Maximum temperature 81; minimum 33; precipitation, .85 inch.

DICKINSON:

Rain or snow was recorded each day of the week but the total precipitation was only .42 inch. Six days of the week were cloudy. Temperatures were below freezing on two nights but no damage was observed.

A high wind on the 3rd damaged grains on a few of the sandy areas in the district. The only serious damage on the station was to oats on Rotation 416 and this plot was reseeded.

Potatoes on the rotations, an increase patch of Cobblers, and selections of this variety were planted.

Land on the rotations was prepared for corn and the plots were staked ready for planting.

Winter wheat on Rotation 258, seeded in grain stubble, was plowed under to get rid of a thick stand of fan weed. This was reseeded to spring wheat. An unusual amount of fan weed, mustard, and pepper grass has shown up on the station and about the district this spring. The fall rains caused good germination, no winter killing resulted, and spring conditions have been favorable for these weeds.

Several varieties of plum are now in full bloom, most varieties having an unusual amount of bloom. The flowers on early blooming apples and crabs are opening.

Maximum temperature 84; minimum 29; precipitation, .42 inch.

MANDAN:

Agronomy

Field work was delayed three days during the week because of snow and rain. Temperatures have been low during the week. The minimum has run from 30 to 32 degrees F. on five days. Over an inch of very wet snow fell on the night of the 5th, and a light fall continued through the 6th.

The delayed seeding of wheat was put in on the 5th. This makes the delayed seeding a little over two weeks later than the regular seeding. An early date of seeding of corn for silage was made on the 8th.

The soil is in good condition at the present time, and the growth of crops should be rapid as soon as the weather warms up.

Crested wheat and brome-grass are both making a splendid growth.

The wind blew very hard on two or three days, and the soil blew badly on one series that had been disked and packed for flax varieties.

Maximum temperature 87; minimum 30; precipitation, .92 inch.

Cooperative Grazing Experiment

The steers have been delivered at the pasture for the grazing work. There are 70 head in the bunch. The cattle are not as uniform a bunch as usual, some are too large and some are too small.

Grass is in good condition for grazing at the present time.

Mandan, continued:

Arboriculture

The lining out of conifer seedlings has been completed during the week. The rains of the last few days, since planting operations were completed, should materially help in establishing the stands.

All caragana hedges have been cleaned of Russian thistles and dead wood.

The removal of dead wood from the species testing blocks has been started. Complete killing has occurred during the past winter in a large number of trees of various species.

Green ash, boxelder, and caragana seed planted recently have germinated, and are now emerging with indications of good stands.

Horticulture

Early planted vegetables are up with a good stand. Cabbage and lettuce plants were set out during the week. They were touched slightly by frost after being set out, but recovered and are doing very well now. Five varieties of each are included in this test.

The second planting of vegetables in the Acre garden is due, but owing to wet weather during the past week, it has been impossible to do so.

Trees, shrubs, and grass are greatly benefited by the late wet cool weather. The Bluegrass lawns on the station apparently have never been in as thrifty and good condition as at the present time.

The Golden currant and Spirea arguta are at present in bloom about the campus. Several other hardy shrubs in the Arboretum test, mostly of S. P. I. origin, are in bloom and appear quite desirable. Prunus triloba double and simplex, Amyzdalus nana, Malus niedswetzkyana, are some of the outstanding ones.

Mandan, continued:

Horticulture, continued.

Considerable work is being spent in removing dead wood and renovating the older groups and hedges. Plants which were weakened by the drought of last year apparently did not have enough vitality to withstand the rigors of the past winter.

Crossing of fruits in the field is being pushed as actively as possible, and potatoes have been cut in preparation for planting.

Visitors of the week included Dr. J. H. Parker, In Charge, U. S. Bureau of Entomology, Bozeman, Montana, Mr. A. L. Norling, County Agent, Washburn, North Dakota, Mr. J. Campbell, General Supervisor, Indian Agency, Browning, Montana, Mr. J. Gray, Superintendent Fort Totten Reservation, North Dakota, and Mr. L. C. Lippert, Agricultural Supervisor for Indian Agencies, State of North Dakota.

BELLEFOURCHE:

The weather during most of the week has been cloudy, threatening, and abnormally cool. Light drizzling rains were received every day, but only on May 7 did the amount of precipitation recorded in a 24-hour period exceed .02 inch. The rain on May 7 stopped field work but was not heavy enough to be of any benefit to crops. The temperature has hovered around the freezing point every night, and frosts occurred on May 7 and May 10, but no damage was done to crops.

The cool weather has been favorable to extensive tillering of most all small grain, but the growth of other crops has been rather backward. The condition of winter wheat has greatly improved.

Maximum temperature 84; minimum 29; precipitation, 28 inch.

ARDMORE:

The week as a whole was stormy with frequent showers, but at the Field Station all of the showers were too small to be of material benefit. Alfalfa still shows the need of water, but the weather has been too cool for it to fire.

Field work during the week consisted largely of corn planting. The corn in the rotations, variety tests, and in nearly all of the large fields was planted. Only two fields remain unfinished, and more than half of both of these fields has been planted.

Other field work consisted of hauling manure, duckfooting fallow land and disking roads.

The pigs on the self-feeder experiment during the suckling period were weighed during the week. The gains of the two lots to date are as follows:

	Feed	First Period	Second Period	Third Period	Total Gain
Lot 1	Mixed Feed				
Sows		9.5	3.4	9.4	22.3
Pigs		17.4	11.4	12.8	41.6
Lot 2	Corn & Tankage				
Sows		-2.4	.4	4.4	2.4
Pigs		8.3	10.7	9.2	28.2

The early growth of native grasses is one of the outstanding features of the season. Western blue grass is fully headed, and will supply much more grazing than it does in most years.

A temperature of 32 degrees was recorded twice during the week and a temperature of 33 degrees on two other days. No frost occurred at the field station. Vegetation is so far advanced in growth that a frost would do serious damage. Trees, flowers, and grasses are now further advanced than they were last year on June 1.

Maximum temperature 73; minimum 32; precipitation, .73 inch.

ARCHER:

The weather has been cool all week. The fore part was threatening, and the last half has been stormy with freezing temperatures. It started storming the afternoon of May 7 and continued until last evening, May 9. The precipitation consisted of rain, snow and hail. At times the storm was driven by a rather heavy wind. The maximum temperature was 66 degrees and the minimum was 29 degrees. This temperature was severe enough to cause the alfalfa to wilt to a considerable extent. The precipitation for the week totaled 1.34 inches.

The precipitation was needed badly. The soil was becoming too dry to list well and there was not moisture enough to germinate the corn. There remains about three days of listing in the dairy field. All the varietal plots of small grains have been seeded except the grain millets. One-half day of seeding of corn on the dry-land plots was accomplished before the storm. It was planned to finish the corn and potato planting this week but the weather prevented.

The work at the station has consisted of seeding the varietal plots of small cereals and the seeding of corn in the dairy field. The storm changed the work to the cutting of potatoes, the hauling of manure, and the hauling of dirt from the seepage pit. The construction of a roadway to the Lincoln Highway is in progress.

AKRON:

The preparation of the rotation corn plots was completed early in the week and the plots staked for seeding. Corn seeding was started Wednesday, May 7, and the two sheep rotation fields completed before the team was driven from the field late in the afternoon. It has been impossible to do field work since.

Judging from vegetative development the season appears to be two to three weeks earlier than usual. For instance winter rye was breaking into head the fore part of the week and this phenomena is not usually apparent before about June 1. Corn planting on farms in this general section has been actively in progress the past ten days.

Akron, continued:

The trimming and the working-out of the roadways was continued though not completed. It was necessary to mow the roadways around the rate and date and the winter wheat variety experiments, the vegetative growth being too rank to be handled by either the disk or the duckfoot cultivator.

Thursday afternoon, May 8, a heavy rain and hail approached from the northwest which deposited nearly an inch of rain within a twenty-minute period. This was too much for the ground to absorb and there was considerable run-off to the low swales for the first time this year. This was as severe a hail storm as the writer has witnessed in his eleven years' experience in this section of Colorado. Ground was white with pellets the size of small marbles which fell with force enough to make a complete din under roofs. On the north and west sides of the buildings the hail banked fully a foot thick. Vegetation was flattened, but fortunately nothing but the winter rye and the earliest seeded winter wheat was in joint, so that the crop damage is expected to be light. Soil has been too soft for a field inspection since the hail. The chief damage was to the trees and shrubbery where fully half the leaves were beaten to the ground. Generally, the bark of the trees was not lacerated, the stones apparently being too mushy. Fruit trees were only in bloom, or only slightly past that stage so that the damage to the fruit crop can only be conjectured.

Other work accomplished was the complete working of the orchards and of the shrubbery plantings.

The May rainfall already is within .51 inch of the 21-year average, and raining in such a way to-day, May 10, as to promise a wiping out of this deficiency.

Maximum temperature 80; minimum 35; precipitation, 2.18 inches.

NORTH PLATTE:

Humid conditions have continued through another week. Rains on four days brought a total of 1.75 inches. Severe storms, with high wind and heavy rain, have been reported from many localities in the State. Frost has been forecast but none has so far reached this station.

A few farmers have started planting corn, but the majority are waiting for warmer and drier weather.

COLBY:

This was a favorable week for field work until to-day, May 10; it has been raining almost all day. The ground was soaked up well by last Saturday's rain. However, with the wheat almost two feet high and unusually thick, the moisture in the wheat fields is being used rapidly. It does not seem possible that the conditions will remain favorable enough from now until harvest to properly mature the crop that is now in prospect, particularly on summer fallow land. While the spring small grains have made considerable progress during the week, they still continue backward compared to the winter wheat. Rye is practically headed out.

The principal work of the week was trimming of the plots and cleaning up the roadways. Everything is in readiness for corn planting as soon as the soil and weather conditions permit.

The State has secured a Caterpillar-15 tractor which we shall probably use on considerable of the tillage work as soon as we can rig up the necessary hitches for the present machinery, or secure new tractor machinery.

Maximum temperature 79; minimum 40; precipitation, .61 inch.

GARDEN CITY:

Weather conditions have been ideal the past week for work on the project. Cultivation of plots that go into row crops was done the early part of the week. With the recent rains, conditions have been ideal for weed growth. The cultivations have effectively destroyed such small weeds and the soil is in ideal condition for final preparation before planting.

Wheat is making a good growth. Some of it is beginning to show signs of heading. Wheat on rotations will be short this year, especially when compared to last year. Wheat on fallow will be heavy, and if we get the normal rainfall exceptionally good yields will be harvested. The rains we have had are not penetrating very far under wheat plots. Wheat is heavy enough to take up most of the surplus moisture available. Wheat on surrounding farms shows poor prospects in many cases. Much of it south and west of Garden City will not make over five or six bushels per acre. Rains have been too late in most cases to be of great benefit. Some fields have also been badly damaged by a red mite or aphis, which has almost killed stands in some cases.

Maximum temperature 80; minimum 41; precipitation, 1.31 inches.

HAYS:

The recent rains have kept the ground too wet for much field work. Rye was turned under early in the week, and a little tillage work was done for weed killing and in preparation for kafir.

Winter wheat is beginning to show a few heads. Practically all of it is in the boot. Wheat on fallow is very rank and heavy, and naturally the slowest to head. On kafir stubble ground and kafir stalk ground, and where stubbled-in on wheat land, or late disking the wheat is very short and poor. On fall plowing and listing it looks fine. Not as heavy as on fallow, but good enough. Oats, barley, and spring wheat are making nice gowth.

Maximum temperature 82; minimum 49; precipitation, 1.02 inches.

TUCUMCARI:

With increasing winds and no rain the conditions in this locality are rapidly becoming more serious. Ranges are short and show but little growth; many cattlemen are still feeding cake. Comparatively little wheat remains alive in this county and the crop will be the poorest since 1927. Much of the abandoned wheat land will be fallowed, but no doubt a marked increase of row crop acreage will occur.

Wind movement has been very high the past week during each day, with almost a complete calm each night. While the average has not been extremely high, a great amount of soil blowing has occurred. In some places the soil is so hard and dry that cultivation cannot be performed. Lister furrows have blown nearly level and middles are being split. If wind and drought continue, the fields will be in ideal shape for moving, after furrows again blow level. Reports from over the county indicate there has been more serious soil blowing damage the past week than during the past three years.

Maximum temperature 82; minimum 42; precipitation, none.
Wind velocity, 9.3 miles per hour; evaporation, 2.837 inches.
Precipitation since January 1, .76 inch.

DALHART:

The week just closing furnished six windy days, especially six windy afternoons. The week was the windiest of the season. Moisture was taken quite rapidly from wheat and also from freshly plowed ground.

The sorghum variety blocks were plowed and harrowed during the week. Spring plowed plots for corn were also plowed. One plot of rye for green manure was turned under. The soil worked fine all through the week. The second date of seeding cotton was planted to-day, May 10. The first date, May 1, is showing slight emergence to-day. The first date of planting for the cotton varieties were planted to-day. The seedbed was plenty moist for seeding. The week has ranged rather cool so that delayed emergence of cotton is expected.

Rye for the most part has the bloom falling. Winter wheat is heading out. Yields of both winter wheat and rye on the station are going to be very low, except on fallow. The winter wheat varieties, planted on fallow, give promise now of excellent yields. Winter wheat planted in furrows on fallow is the best wheat that there is on the station.

Maximum temperature 79; minimum 38; precipitation, trace.
Wind velocity, 6.8 miles per hour; evaporation, 2.276 inches.

BIG SPRING:

For the most part, weather conditions have been favorable for field work during the past week. The first and only bad sand-storm of the season occurred on May 6. Planting was just getting under way in good shape throughout this section, and many fields were blown level. This will necessitate much replanting. The blow, coming after the recent rains had packed the soil, found the country in fine shape to start rolling.

One plot of kafir in the May 1 date-of-seeding was covered up, and several large limbs on the old peach trees were broken off; aside from this, no damage was done on the station.

Big Spring, continued:

Spring plowing was completed last week, and all plots in the rotation field were disked. Other work consisted of sand furrowing increase fields, and hoeing weeds from vineyard and around the grounds.

Very good stands have been obtained from all crops in the May 1 date of seeding test.

Maximum temperature 90; minimum 48; precipitation, .31 inch.

LAWTON:

The current storm period of the past week resulted in much damage to farm and city property in Comanche County and in adjoining localities. Lawton and nearby surrounding territory escaped damage of consequence. Rainfall varying from .02 inch to 1.29 inches was recorded May 4 to May 9. In each instance high winds, much electrical disturbance, and hail accompanied the rainfall. Precipitation this week amounts to 2.11 inches; for the month to date the total is 3.72 inches. From April 19 to May 10 the total is 7.72 inches.

Although there has been considerable sunshine and usually a stiff wind between the rains, the ground dried slowly the past week. Field work was possible for a few hours on only a very few rapid drying places. Field work has practically been suspended since April 25, and further delay in planting cotton and feed crops is very undesirable.

Erosion has been heavy in many of the fields and much extra work is necessary in the preparation of seedbeds and the repair of drainage ditches.

Oats is pretty well headed. Wheat is heading very unevenly and this stage of development ranges from 1 to 50 per cent or more. Apparently there will be a lot of very short, late sucker heads to contend with when the major part of the crop is mature.

Lawton, continued:

A sweet clover nursery consisting of 12 strains was planted May 9. 500 Austrian Pine were also planted on this date.

The weekly climatic records were:

Precipitation, May 5 - 0.02 inch.
" 6 - 0.53 inch.
" 7 - 0.27 "
" 9 - 1.29 inches.
Total.....2.11 inches.
Maximum temperature 89; minimum 50.

WOODWARD:

Rain has fallen on nine of the past 20 days, the longest period without rain being two days. The total rainfall over this period is 7.36 inches. Little of it except the last two inches ran-off This should put the wheat in the best possible condition, considering injury that had previously resulted from long winter drought.

Work on the Station has consisted of hauling brush, planting tree seed, hoeing, and running concrete in house foundation.
Maximum temperature 85; minimum 50.

LIBRARY
JUN 17 1930

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

MAY 17 1930

REPORT FOR THE WEEK ENDING MAY 17, 1930.

SHERIDAN:

The weather continued cold and cloudy throughout the week, with no precipitation of consequence. Growth of all vegetation has been slow. Corn has been planted in the rotations, pastures, seed block of Northwest dent, and the varieties are being planted to-day, May 17. Flax emerged during the week with a good stand, some of it apparently being rather thick. Conditions for germination and emergence of flax seed were exceptionally good.

Pigs were weighed and put on pasture during the week. A part of the sheep were hauled and put on pasture. The remainder of the sheep are expected to be available to-morrow, May 18.

Maximum temperature 63; minimum 31 (no frost sufficient to damage vegetation noted); precipitation, .03 inch.

MANDAN:

Agronomy

Field work was delayed three days the past week because of rain. The work is now behind and corn planting will be delayed.

Plowing for corn will be nearly completed to-day, May 17, and most of the harrowing. It will not be possible to get the corn in by the normal time of planting.

Killing frosts have occurred on two nights during the week. The temperature went down to 26 degrees last night. It is hard to tell at present just how much damage was done. The damage to small grain will no doubt be slight.

The weather has been cool the past week. On three days the maximum temperature was from 45 degrees to 39 degrees.

The rainfall for the month to date has been about 2.25 inches, which is nearly normal for the month. The soil is now in good condition as regards to moisture, and with warm weather crop growth should be rapid.

Maximum temperature 64; minimum 26; precipitation, 1.29 inches.

Mandan, continued:

Cooperative Grazing Experiment

Grass on the prairie is in the best condition for grazing that it has been in at this time of year for some seasons. The cattle were branded during the week.

The Grazing experiment will not be opened as early as it has been for the past few years, as it is necessary to make a few adjustments with the cattle.

Arboriculture

The rainy weather of the past week has prevented any field work until the latter part. Cultivation has commenced in the nursery. Dead wood has been removed from all of the willow species testing blocks and from the solid plantings of boxelder, poplar, and willow.

Horticulture

The second planting of vegetables was completed during the week. Miscellaneous projects, such as mulch paper test, variety tests of corn, cabbage, and lettuce, muskmelon breeding, including 22-1929 selections, all carried on in the coulee garden, were also started during the week.

The grounds are being groomed; roads edged and cleaned; lawns cut, and shrubbery hoed. Shrubs in bloom at present time are Spirea arguta, Ribes aureum and Syringas in variety just opening up. There appears to be some slight damage to the latter by last night's heavy frost, but it is still a little early to determine this definitely.

Mr. John Haw, Director of Immigration and Agriculture, Northern Pacific Railway, St. Paul, Minnesota, was a visitor during the week, as was also Mr. Geo. Baker, Acting Chairman of the Animal Husbandry Department of the North Dakota Agricultural College, who, on May 16, graded the steers that are to be used in the grazing experiment.

BELLE FOURCHE:

Unsettled, cool, windy weather has prevailed throughout the week. A slow, steady rain of .76 inch precipitation was received May 11 and May 12. No run-off occurred, and the first foot of soil on all spring small grain plots is well saturated. At least an average yield of bromegrass and alfalfa is now practically assured, and crop prospects as a whole are exceptionally good.

Owing to the unseasonably cool weather, very little plant growth has taken place. Winter rye continues to make good progress, except on spring wheat stubble where the rye is weak and quite backward. Sweet clover has made an unusually small amount of growth this spring, but alfalfa and brome-grass are 8 to 10 inches high. Alfalfa seeded April 16 is coming up very slowly, but good stands of brome-grass and sweet clover seeded with nurse crops have been secured. Corn and potatoes were planted the latter part of the week.

Visitors during the week were, Mr. S. S. Buckley, of the Animal Husbandry Division, Mr. O. R. Mathews, Superintendent of Ardmore Field Station, and Mr. S. B. Nuckols, of the Office of Sugar Plant Investigations.

Maximum temperature 64; minimum 31; precipitation, .77 inch.

ARDMORE:

Cool, cloudy weather with periods of high wind velocity prevailed during the entire week. There were two periods of precipitation. A rain of 1.30 inches began the evening of the 10th and lasted until midday Monday. There was little or no run-off on the station from this rain and the amount falling was sufficient to materially benefit the native pastures, alfalfa, and tame grass plots, some of which were showing indications of drought.

Work on the station consisted of corn planting, cleaning fence rows, and general repair work.

Ardmore, continued:

All pigs were vaccinated on the 16th.

Doctor S. S. Buckley, of the Bureau of Animal Industry, was a station visitor during the week.

Maximum temperature 65; minimum 32; precipitation, 1.72 inches.

ARCHER:

The weather has been cool and stormy most of the week. At the present time there are 7 inches of snow on the ground and it is still falling. This morning the precipitation measured .70 inch. The total for the week is 1.42 inches, and for the month, to date, 2.76 inches. The maximum temperature for the week was 60 degrees, and the minimum 29 degrees. The average maximum temperature was 50 degrees, and the average minimum 33 degrees. Precipitation has been recorded every day during the week.

These conditions have not been favorable for field work. During the week there were only $1\frac{1}{2}$ days in which it was possible to work in the field. This time was spent seeding corn. There remains one-half day of seeding both in the dairy field and in the rotation plots.

The wet, cool weather has not been favorable for corn that has been seeded. The other cereals will probably not be injured. However, growth has been slow. Seedings made May 1 did not emerge until May 16.

Work at the station has consisted of hauling manure and gravel, seeding corn, digging out some stray cottonwood trees, and transplanting some Lombardy poplars.

AKRON:

Rain in progress when last week's report was being written totalled 1.78 inches.

The week has been very unfavorable for field work with cool, cloudy weather interspersed with drizzling rain. It has snowed all day to-day, May 17, and this afternoon shrubbery about the buildings is weighted down with heavy snow. Temperature seems to be near freezing with good prospects for freezing temperatures to-night.

Some field work was accomplished early in the week, and the third date seeding of the date of seeding spring grains experiment was accomplished Friday afternoon midst sticky surface soil.

Time has been spent indoors grinding feed, getting grain and forage sorghum varieties ready for seeding, and in hand picking grain millet varieties. Three pounds each of the grain millets are being hand picked for the variety experiment in an effort to clean up this station's seed supply.

Spiraea vanhouttei was practically in full bloom before to-day's snow.

Maximum temperature 70; minimum 31; precipitation, 2.70 inches.

NORTH PLATTE:

Another heavy rain occurred on Saturday, May 10, after the report for that week was written. Clear skies prevailed from Sunday to Wednesday, inclusive. Rain fell intermittently during Thursday and cold, cloudy weather has prevailed since. Rainfall since last report totals 1.92 inches, bringing the total for the first 16 days of May to 3.67 inches.

Some headway was made in corn planting early in the week, but is being delayed again at present on account of too much moisture in the soil.

North Platte, continued:

Winter wheat is becoming very rank, especially on summer tilled land. Pastures and meadows are in excellent condition.

COLBY:

The rain of last Saturday, May 10, continued almost all day Sunday, and, after having cleared off Sunday afternoon, several showers came up in the night. The total for the two days was 2.27 inches, the heaviest rain in several years. The rain was accompanied by a high wind most of the time which caused many trees to lean over badly. A lot of branches were broken off, and in town one uprooted tree was noticed. This was followed by two days of pleasant weather. During the last three days it has been cloudy and rainy most of the time. To-day, May 17, it has rained or drizzled all day practically without interruption. The temperature at 6 p.m. to-day is 34 with no prospects of going higher in the night. However, there does not appear to be any prospect of the clouds clearing away either.

No field work was possible the entire week.
Maximum temperature 67; minimum 35; precipitation, 3.28 inches.

GARDEN CITY:

Cultivation of seed-beds was done the fore part of the week. Manured fallows were plowed and the fallows in methods of fallow for wheat and milo were plowed. Ground is in excellent condition with an abundance of moisture in surface two feet.

Wheat is starting to head on some plots. Rye green manure plots are about ready to plow under. Some farmers are starting to plant corn and sorghums.

A heavy hail storm struck some sections of the immediate territory Thursday morning, May 15. No material damage was done to any crops on the station, but alfalfa fields close by suffered severely. Many of them will have to be cut as soon as it gets dry enough to get into them.
Maximum temperature 78; minimum 39; precipitation, 1.53 inches.

HAYS:

Very little field work could be done during the week because of wet weather. The work consisted in throwing in ridges on seed-bed preparation plots for sorghum, sowing of alfalfa plot, and cultivating of roadways. Fallow plots to be plowed have been too wet to plow for two weeks.

All small grains are making heavy growth. Winter wheat on fallow, and green manured plots is lodging in spots. Some of the wheat has been down three times, but it has raised each time. However, it will not take much of that behavior to cause permanent injury. The growth is very heavy on the green manured and fallowed plots.

For ten days wheat heads have been coming out. As usual, the heads appeared first on the thinner and shorter wheat, and later on those plots having made the most vegetative growth. The wheat ranges in height from 12 to 30 inches.

Oats and barley ranges from spotted and poor on spring plowing to very heavy on fallow. These crops are beginning to show signs of heading.

Precipitation, total of four showers during the week, 1.57 inches.

TUCUMCARI:

The past week has been cool, moderately windy, and generally cloudy. In spite of nearly constant indications of rain, only .04 inch was received. This brings the total for the year to .83 inch. Wheat and rye on fallow are very short, but in full head and looking as if a crop might be produced. Only stray plants are to be found on the MCA and B plots.

Station work has consisted of building fence and grubbing yucca from field borders and roads. No attempt was made to plant the May 15 date-of-planting plots, for the necessary cultivation preparatory to this could not be done. Furthermore, the soil is dry below planting depth.

Ranges are very short and a few ranchers have moved their cattle some 80 miles north, where abundant rains have fallen.

Maximum temperature 90; minimum 31; evaporation, 1.943 inches.
Wind velocity, 7.4 miles per hour.

DALHART:

A rain of .91 inch fell Thursday night, May 15, and delayed field operations for the rest of the week. Previous to Friday the farming operations consisted of plowing for variety tests and rotation plots. This operation would just about have been completed, except for later date plowing, if the rain had not prevented plowing the last two days of the week. The ground was plowing fine and was being harrowed after plowing, as drying winds dried it out quite rapidly. All fall plowed and fallowed plots were disked during the week.

The rain was torrential in nature and was accompanied with considerable hail. No damage was noticed yesterday, May 16, from the hail, but in taking notes on grapes to-day it was noticed that they were severely battered, with many bruised runners and shredded leaves. The rain was rather local in extent. At Dalhart there was evidently twice as much rain and much more hail. Wheat and rye on the station are undamaged from the hail.

The first date of planting cotton is up to a good stand. Wheat is fully headed. The variety test plots are going to give good yields if their present appearance continues. Winter rye has started filling but yields are going to be poor. Barley is going to be heading within the coming week and will be very short. Oats will likewise be short. The various plantings of sweet clover from December 15 to March 15 are up to good stands. The April 15 date of planting is up to a good stand for the scarified seed, but not for the unhulled. Second year yellow sweet clover is in full bloom. Sweet clover allowed to reseed last year is up to a good stand except for spots.

Maximum temperature 85; minimum 35; precipitation, 1.24 inches. Wind velocity, 7.6 miles per hour; evaporation, 1.727 inches.

LAWTON:

Showers, cloudy skies, and misty weather enforced nearly another week's delay in the planting of row crops. Cultivated soil dried very slowly in the absence of sunshine, and with but little wind velocity.

Lawton, continued:

The surface soil is packed from the rains of the past month, and in most places a heavy growth of small weeds and crab grass is present.

A few plots of cotton were planted on the drier spots and some spring-toothing was done on the 13th and the 17th, when it was possible to do a little field work in the afternoons.

Growth of oats is quite satisfactory and fairly good yields are in prospect. The crop is fully headed and at present is free from smut. Wheat is growing and heading very unevenly, and yields will be generally quite low.

A heavy infestation of adult chinch bugs is present this spring and a good many of the first brood of the current year have hatched.

Cotton planted April 16 has made practically no growth to date. The May 1 planting was necessarily omitted because of wet weather, and the May 15 planting was made on the 17th. But very little cotton has been planted on the surrounding farms of the county and much of this will have to be replanted.

Precipitation recorded on five days during the week totaled .38 inch. Temperatures during the latter part of the week were pretty cool, ranging from a minimum of 53 to a maximum of 81.

WOODWARD:

The past week has been characterized by rain and fog, and is a continuation of a period of wet weather existing since April 21. During this period a total of 10.30 inches of rain has fallen. Hail and damaging winds have been reported from some neighborhoods, but in general rain has come gently, and there has been a comparatively small amount of run-off. Despite the continued wet weather, however, there is no prospect for a heavy yield of wheat, due to preceding droughts.

Woodward, continued:

Farmers are fretting over the delay in planting spring crops. Many, in fact, have already planted and replanted kafir and milo and still have no stand. This is to their advantage, as rowed crops are usually planted far too early. The only drawback to the situation is that there was very little good seed in the country and most of this has been used up. It is likely there will be a much greater acreage of row crop put out this year than in any of the past two or three years.

Two or three companies have been active in this section attempting to sign up acreage for cotton, with the view of putting in cotton gins. The closest gin is now about thirty miles south of Woodward. It is likely gins will be put in even north of Woodward. Farmers are ready to try anything new, since prospects of paying prices for wheat are so poor.

About a day of work was accomplished in the field. Otherwise, time was spent on construction work.

Maximum temperature 77; minimum 45.

HUNTLEY:

Weather during the past week has been dry and cool with minimum temperatures hovering about the freezing point on four days. Good rains have been received over the north and south bench country, but precipitation locally has been confined to one light sprinkle.

Fall-sown grains are showing the need of rain, but spring crops are still fresh. Alfalfa has made a good growth. Domestic grasses have developed very slowly this season, and at present are showing the need of rain.

Corn planting was completed during the week, but uniform stands cannot be expected until rain is received.

Huntley, continued:

Pasture and check lots of fall pigs were weighed up and the former were placed on the alfalfa and brome-grass pastures, May 16. On the same date weights were taken of the spring pigs on winter rye pasture and in the check lot.

Maximum temperature 68; minimum 31; precipitation, trace.

MOCCASIN:

Cool, cloudy weather prevailed during the week with occasional showers. Evaporation and wind velocity were low for the period.

In spite of cool weather all crops made good growth during the week. Temperatures continued to approach the freezing point at night.

All spring seeded plots on the rotations have emerged with the exception of flax. Corn on the rotations was planted the last of this week. All spring seeding has now been completed on the station with the exception of a few miscellaneous projects. Summer fallow work was started this week.

Spring seeding is rapidly approaching completion in the Basin and early seeded fields have emerged to good stands. Moisture conditions remain ideal for all crops. Due to weedy conditions a few fields of winter wheat are being torn out and reseeded to spring grain.

Maximum temperature 57; minimum 29; precipitation, .29 inch.

LIBRARY
JUN 17 1930
PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

REPORT FOR THE WEEK ENDING MAY 24, 1930.

HAVRE:

With temperatures somewhat below normal, growing conditions during the past two weeks have been slow. Rain was recorded on four days with a total of .40 inch. Several days were rather windy for this season.

Perfect stands, however, have been obtained on all small grains. Early seeded grains and grasses are growing very well. Native grass is also making very good growth. June grass has been headed out for nearly a week. Winter rye also began to show head during the past week. Stands of flax, while not perfect, will be better than usual. Corn on the rotations and variety tests was seeded and has sprouted.

There is still some seeding of wheat and feed crops being done in this part of the State. There seems to be a decided increase in the amount of fallow to be done this year. A great deal of this will not be plowed and is now being cultivated with either a duckfoot or a one-way disk. There are a number of complaints of weedy grain, early seeded spring wheat in some cases being very badly infested. Winter wheat, especially in the stubble, is badly infested with mustard.

The long drawn out spring, with the consequent delay in real growing conditions, has resulted in some killing of shrubbery. Persian Yellow roses began leafing out nearly a month ago. In some cases, branches that had started to leaf out have died. Among the Persian Yellow roses seeded last year very few have entirely died out, but some of them show quite a lot of top killing. None of the hydrangeas planted last year came through the winter. Spiraea frobella and Spiraea billardi have not entirely killed but the top branches in every case are dead. These are both branching out nicely near the ground. Some of the plants of Spiraea arguta entirely killed while others came through in very good shape. None of the vanhouttei killed and there was practically no top killing. This shrub on the south side of the building is now in bloom.

Maximum temperature 83; minimum 29 (not killing frost).

Precipitation, .40 inch.

SHERIDAN:

The week was alternately hot and cold with considerable cloudiness, but with no rain of consequence. Frost occurred on the morning of the 23rd, but no damage was noted to vegetation on the station except to potatoes on some low ground. Alfalfa is wilting badly, but this probably is due to drought rather than the frost. All alfalfa and grass land is quite dry and needs rain badly. Cultivated ground still shows good moisture conditions, but rain would be of great benefit to all crops.

Planting of potatoes and corn, except for late plantings, was completed during the week. The rotation alleys were cultivated, the alleys in the varieties of winter wheat hoed, and the shelterbelt harrowed with the spring tooth harrow.

It is now fully apparent that the shelterbelt suffered the greatest injury from the past winter of any one time since it was planted. A large part of the Northwest poplars in the west row of the belt immediately north of the railroad were killed completely, many more of them were killed back badly, and only a few on the north end escaped injury entirely, out of that row. A few in the west row south of the railroad also were killed, but the most of them there escaped injury. Chinese elm and box-elder also killed back badly, many of them killing out entirely. No injury is apparent to any of the trees in clumps about the buildings, where the Chinese elm killed back the worst in previous years.

Many of the shrubs, including Spiraea vonhouttei, killed back badly. Fruit plantings seem to have escaped any great amount of injury.

Maximum temperature 83; minimum 29; precipitation, .26 inch.

HUNTLEY:

Cool weather during the past week has been a benefit to small grains which are beginning to show the need of moisture. Winter rye is beginning to head on very short straw and looks dry. Spring-sown small grains appear wilted during the warmest part of the dry. Alfalfa has made a good growth and grasses show some improvement over their condition of a week ago, although they do not yet look normal for this time of year.

Field work during the week has consisted in cultivating fall-plowed fallow plots and roads with the duckfoot, planting potatoes, beans, soybeans, sorgo, alfalfa varieties and grasses.
Maximum temperature 86; minimum 33; precipitation, .19 inch.

MANDAN:

Agronomy

The past week has been cool and windy. The wind blew hard on four days. Some nights have been cool with temperatures near freezing.

Nearly all the week has been spent in corn planting. Corn in the rotations was planted on May 19, which is the average date for corn planting. Corn varieties, silage test, breeding block, and seed blocks have been planted. A field for feed is being listed in to-day, May 24.

A number of grasses have been set out in the grass nursery.

Brome-grass and crested wheat grass are both making a very heavy growth, and give indications of a good crop. Growth of most forage crops has been slowed up because of dry weather.

Weeds are coming on rapidly. Pepper grass is very bad this year. The fall rains were right to give it a good start last fall.

Potatoes were planted in the rotations during the week.
Maximum temperature 87; minimum 32; precipitation, none.

Mandan, continued:

Cooperative Grazing Experiment

The initial weights for the cattle were completed during the week. The average weight per head for starting on pasture will be about 730 pounds. This is near the normal average.

There has been some delay in getting the cattle started on pasture, as it was necessary to make some adjustments of the cattle. Some were obtained at Fargo and shipped out during the week.

Grass is very good on the prairie, but growth has been somewhat retarded during the week because of cool weather.

Horticulture

Frost did considerable damage to the blossoms of plum and apple trees, so the set of fruit will probably not be very heavy for most varieties. Currants and gooseberries have set heavy crops of fruit.

Work during the week included treating apple trees for blight, thinning out sprouts on currants, preparing beds for soft-wood cuttings, cultivating, and hoeing.

Arboriculture

Cultivation of testing blocks with the one-horse cultivator, has continued during the week.

A number of additional frames have been made for new conifer seed-beds. Seven beds each of Black Hills spruce and Colorado blue spruce, five beds of Western yellow pine, three beds of Scotch pine, four beds of Red cedar, and one bed each of Limber pine and Dwarf juniper have been planted.

A small amount of hoeing has been done in the nursery.

Mandan, continued:

Four cars containing students from the New Salem (North Dakota) High School spent most of Wednesday, May 21, at the station. Doctor J. S. Popoff, Professor Animal Husbandry, Zootechnical Institute, Moscow, Russia, visited the station Thursday, May 22, giving most of his attention to the steer grazing project.

BELLE FOURCHE:

Warm weather, strong winds, and heavy moisture demands of a vigorous plant growth are fast depleting the supply of moisture in the soil. Aside from a light shower on May 18 no precipitation was received, and the rapidity with which the soil has dried during the past week is very unusual. Alfalfa and brome-grass are beginning to suffer from lack of moisture, but all other crops have made an exceptionally rapid growth. Sweet clover has made such outstanding progress that it is now ahead of alfalfa. Winter rye is heading, but the growth of rye on spring wheat stubble continues to be weak and backward. Alfalfa seeded this spring has made no perceptible growth since emerging and is endangered by the rapid drying of the surface soil.

Alley ways were cultivated during the fore part of the week. Roads were staked for trimming, and trimming was commenced. Corn and potato plots were harrowed, and another set of soil samples was taken.

Maximum temperature 86; minimum 34; precipitation, .12 inch.

ARCHER:

During the week the weather has been cool and unsettled with snow and frost. Following the heavy snow of a week ago there was a severe freeze during the night of May 17 with the temperature dropping to 18 degrees. Foliage not covered with snow was frozen. Most of the spring growth was covered and was not seriously injured. The snow hung to the leaves of the trees and while they wilted to some extent they are bright green now. The buds on the ash and Black Hills spruce were frozen. Field crops were not injured.

Archer, continued:

The precipitation to date for May is 3.05 inches. That occurring during the past week consisted of snow and totaled .29 inch. This was scattered over three days. The snow, due to the soaked condition of the soil, prevented field work during the greater part of the week.

Work at the station has consisted of cutting potatoes, planting potatoes and seeding corn. The date of seeding of May 15 was not done until May 20. All seedings except the varieties of millets, beans, and corn have been made.

Maximum temperature 60; minimum 18; precipitation, .29 inch.

ARDMORE:

The week as a whole was cool and threatening, but the amount of precipitation was low. The temperature dropped dangerously low but only one light frost was noted. Potatoes just emerging were damaged slightly, but no other crop showed injury.

All of the fallow plots in the rotations were plowed during the week, and nearly all of the plowing for fallow on the larger fields was completed.

The wintering test with steers was completed, and the steers were turned on pastures on May 22. Pastures are unusually good.

The pigs on the self-feeder and limited ration experiments were separated and started on test on May 24.

Maximum temperature 83; minimum 33; precipitation, .10 inch.

AKRON:

The past week has been favorable for field work, but the soil worked very heavy for all types of seeding.

Akron, continued:

First date seedings of beans and of grain millets were made early in the week, followed by the seeding of the forage sorgos in the general forage variety experiment, the rate and spacing corn experiment and the rotation corn plots.

Spring grains have been at a stand-still for the past two to three weeks and to-day, May 24, they are not far enough advanced to cover the ground. Ground of all small grain plots was left tightly packed by the hail storm some ten days ago and it seemed advisable to rotary hoe them. This implement did a very satisfactory job of breaking the crust and of creating surface soil tilth on the thin winter wheat plots and on the spring sown small grains. With any kind of growing weather these crops should now be able to outdistance the weeds which undoubtedly will be held back by the rotary hoeing.

The temperature dropped down to 27 last Saturday night and this seems to have finished whatever fruit the hail storm left. The temperature has been down to 32 or lower on three different occasions during the past week, and the effects of these frosts are very evident on all tender sorts of vegetation.

Ewes were distributed to their various summer pastures during the week. Pigs were sprayed for mange early in the week. Pigs are being transferred from the rye pasture to the barley pasture to-day.

Corn planted on the sheep rotation fields May 7 is just appearing to-day. It is questionable whether a stand will appear and it looks like a replant job.

Maximum temperature 88; minimum 27; precipitation, .27 inch.

COLBY:

No rain has fallen since Saturday, May 17. After the soil dried out enough to permit field work, the weather was very favorable, although a bit chilly. The corn on the D.L.A. project was planted Thursday, May 22. Since then all the fallow plots to be plowed at this time were plowed. All those needing weeding were gone over with the spring tooth harrow. The rye was turned under. The two plots on fall plowing after winter wheat, while

Colby, continued:

they had a good stand, looked thin and spindly, because they had stooled very little, and had almost no leaves. The one drilled in milo stubble looked very thick in comparison, and had a rather heavy growth of leaves.

All the alleys and edges of the roadways were cultivated with the one-horse cultivator.

The temperature went down to 32 degrees last Sunday night but no evidence of damage was observed anywhere at the station. Some frost damage to tender vegetation was reported from various localities in the county.

Maximum temperature 89; minimum 32; precipitation, .41 inch.

GARDEN CITY:

Weather conditions have been very favorable to field work since last Monday, May 19. Warm, drying weather accompanied with a high wind part of the time has prevailed since Wednesday.

The ground has an abundance of moisture in the surface three feet for row crops. Wheat plots have removed the moisture very rapidly. Soil moisture samples were taken on the MC wheat series Friday, May 23. All except the fallow plot showed an abnormally low moisture content below the surface foot.

Wheat is heading rapidly. On most plots it stands about 22 to 28 inches high. The wheat on fallow is higher and much heavier. All plots which are to be planted to row crops are being spring-toothed to-day, May 24. We expect to do the planting the last half of next week. The surface is in ideal condition for planting after the spring-toothing operation. Weeds are making rapid growth.

Maximum temperature 94; minimum 35; precipitation, .32 inch.

Nights the past week have been unusually cool, four out of the seven have been below 40 degrees.

TUCUMCARI:

Very little change has occurred in climatic conditions the past six weeks. April was unusually warm and May has been comparatively cool. Wind velocity the past three weeks has been as high as in April and considerably more of a problem. May precipitation has been as deficient as that of the preceding months. Ranges, lawns, and trees are not in as good condition as a month ago, while livestock are losing flesh if not fed.

No field work has been attempted in several weeks, since listing was performed on considerable acreage in early April and the soil has been too dry to make further planting preparations. Soil movement has been more serious this month than in any preceding month this spring.

The winter wheat estimate for the Panhandle has been reduced from about 30 million to 18 million bushels or about 40% of normal, although several good rains have been received recently over much of that territory. It is very probable the crop in this county, lying just west of the Panhandle, will not exceed 10 to 20% of normal, depending upon future conditions.

The deficiency in precipitation, with 1930 and average, by months, is shown below:

	25-year average	1930	Deficiency
Jan.	0.29	0.11	0.18
Feb.	0.50	T	0.50
Mar.	0.78	0.38	0.40
Apr.	1.64	0.12	1.52
May (to 24th)	1.72	0.22	1.50
Total 4 3/4 months.	4.93	0.83	4.10

Maximum temperature 96; minimum 35; evaporation, 2.622 inches. Wind velocity, 6.8 miles per hour.

DALHART:

Wind conditions were more severe this week on young plants than for any similar time this spring. The wind was especially strong on Tuesday and Wednesday, May 20 and 21, respectively. For approximately one hour Wednesday evening the air was fairly well laden with soil. Damage to small corn and sorghum plants was quite severe. Luckily the emergence had not started on the station plots.

Dalhart, continued:

After the rains of the previous week, which came just after planting corn and sorghum varieties, the ground crusted over quite severely. It was necessary to break the crust so that emergence could take place. This was done on all corn rotation plots, corn variety plots, cotton variety plots, and sorghum variety plots. The surface planted corn plots have since emerged to thick stands. One replication of the sorghum variety plots has mostly all emerged. The other replication of the sorghum varieties has not emerged to so good a stand as the crust was purposely left unbroken two days after the other replication was broken. Listed corn has not emerged to stands. Cotton planted previous to this week apparently will emerge to good stands. The last date of the cotton varieties was planted on the 20th. Three additional corn varieties were also planted then. The soybean nursery of 60 varieties and strains was seeded to-day, May 24, on fallow and on cropped land. Three plots of peanuts were also seeded this week. Two rotation plots of soybeans were seeded.

This week saw the completion of the ploving for sorghum and cowpeas. All plots previously plowed were also either harrowed or disked. All ground is now prepared for seeding. The vineyard was cultivated also.

Winter wheat on fallow continues to look good. Barley is heading short and cannot yield much from present indications.
Maximum temperature 93; minimum 38; precipitation, none.
Wind velocity, 7.6 miles per hour; evaporation, 2.274 inches.

BIG SPRING:

Weather conditions during the past two weeks have been very favorable for field work. Although rain and hail have been reported from various sections of the county, the station and the area surrounding it have been free from both. A rain now would be very much appreciated, as the soil is getting rather dry for planting.

Big Spring, continued:

The greater part of the week ending May 17 was devoted to preparing plot land for planting. This consisted of disking and harrowing the rotation field and the one to be used for the cooperative plantings. The May 15 date of planting of cotton, grain sorghums, and sorgos were planted on the 13th and all have now emerged to good stands. Cotton and peanuts in the rotations have been planted this week. The cotton varieties consisting of 12 different varieties, the cotton cooperative series consisting of 48 single row varieties, and the cotton spacing block were planted during the past week.

High, hot winds have prevailed during most of the past week. They have dried the soil out to such an extent that it is doubtful whether the cotton will emerge to good stands unless it rains soon. Other work during the past week has consisted of planting an increase block of Sudan grass and sumac.

Maximum temperature 102; minimum 48; precipitation, none.

LAWTON:

Planting of row crops on rotation plots and in cooperative projects was completed May 22. A torrential rain of 1.6 inches fell in approximately three quarters of an hour about 6 p.m. on the 22nd. This rain was accompanied by some hail and driven by a high wind. The surface soil was quickly packed by the beating rain and did not permit of much penetration. Soil erosion was heavy, making it necessary to replant two plots of kafir and one plot of cotton. Some "patch" planting will also be necessary.

Although cotton is emerging slowly and unevenly through the hard surface crust, the indications are good for a satisfactory stand. Cowpeas are emerging slowly and very unevenly, and poor stands are likely to result.

Wheat continues to develop slowly and leaf rust gives the crop a very poor appearance. Some leaf rust is present on the oats but growth and development of this crop is quite satisfactory. On the early seeding some of the heads are beginning to ripen.

Lawton, continued:

Emergence of sorghums in the chinch bug resistance project, as judged by the present condition, is likely to be good.

Temperatures since the 22nd have been entirely too cool for quick germination and adequate growth of cotton. Planting of the crop throughout the county has been delayed by unfavorable weather for about three weeks. Many of the fields are badly eroded, and many of them are covered with grass and weeds which hinder the preparation of good seed-beds.

Minimum temperatures of 46 and 47 were recorded the latter part of the week.

Professor E. C. Chilcott visited the station May 21.

WOODWARD:

The past week has been dry and windy following a month of rainy weather. Little field work has been accomplished except to cover practically all of the 400 acres on the station with cultivators and spring-tooth harrows, to stop blowing and at the same time kill weeds. Weed growth has not been excessive to date because of very cool weather. Prospects for wheat seem less bright as the days pass, and merchants generally concede that this is going to be a hard year.

Messrs. M. A. McCall and Allen Clark were visitors on the 24th. Professor E. C. Chilcott spent most of the week at this station.

Maximum temperature 87; minimum 41.

DICKINSON:

Cool, windy weather with frost on several nights has retarded plant growth to some extent. Frost has occurred on 12 nights of the month to date with a minimum temperature of 27 degrees on the 16th, yet no special damage has resulted.

Dickinson, continued:

Precipitation to date in May has amounted to 1.16 inches. Grains have developed normally, but sod crops are beginning to show need of water.

Corn was planted on the rotations on the 15th, the varieties on the 16th, and an increase field for silage on the 20th. Corn plots on the rotations were harrowed during the week.

Some grading and improvement work was done on the station roadways.

Maximum temperature 83; minimum 30; precipitation, .02 inch.

NORTH PLATTE:

Heavy precipitation again occurred at the end of last week. Snow amounting to five inches, together with sleet and rain brought a total precipitation of .70 inch, making the April-May total to date 8.50 inches. Dry, warm weather has prevailed since that time.

Corn planting in this section is nearing completion. Very little has emerged. Some of the early planting will have to be replanted. Alfalfa was so badly lodged by the snow that it will not be possible to recover the first cutting completely. Trees and shrubs were more or less broken down. A minimum temperature of 31 degrees was recorded but no frost damage occurred.

HAYS:

Damp, cloudy weather which had prevailed for two weeks ended early this week with an .08 inch shower. Since that time dry, breezy weather has prevailed.

All small grain crops have been making normal development. Winter wheat is practically all headed on the project except on some of the fallowed plots. Oats and barley are heading, barley being a little in advance of the oats. These crops are very ragged on the spring plowed plots. Some of the grain germinated promptly, and some of it failed to germinate until after good rains occurred some weeks after seeding. Spring wheat is not yet heading. It has made

Hays, continued:

fair growth, but does not have a good healthy color. It may be suffering slightly more from plant lice than the other spring grains.

Plant lice are thick in spots in the grain. Unfortunately, they are thicker in spots, and some plots have more of the spots than other plots. Winter wheat in Rotation 55 is especially handicapped in this way. Up to two weeks ago the wheat was very fine and even all over the plot, but now is very badly damaged on the south side of the plot by plant lice. The writer has never seen a crop of wheat so heavy and so far along as this plot suffer so seriously.

The ground has been too wet and cold for planting of corn, but conditions are getting better, and preparations are being made for corn planting early next week.

Canadian field peas are about 12 inches high and making good growth.

Brome-grass has made practically no growth except enough to have furnished a little pasture. No seed stalks are in evidence except a few along the margin of the plot. The newly seeded plot of brome came with only a fair stand, which now is threatened with a choking by weeds and foxtail.

The one and two-year old alfalfa has made a growth of about 8 inches. It is now at a stand-still. New sown alfalfa is up with a very good stand.

Maximum temperature 90; minimum 33; precipitation, .08 inch.

NOTE:

Mr. Irving J. Jensen, Superintendent, Judith Basin Substation, Moccasin, Montana, died on May 20, 1930, after a short illness.

JUN 17 1930

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

REPORT FOR THE WEEK ENDING MAY 31, 1930.

PENDLETON:

The past week has been rather cool and windy. Rain on May 30 and 31 totaled .96 inch, making a total of 2.32 inches for May. This rainfall practically assures a normal crop for this area. The winter wheats are heading. Some of the earlier varieties are fully headed. Spring barleys are also heading. In some of the draws and flats the wheat is very rank. After the recent rains this wheat is badly lodged and twisted in all directions, and the farmers will have a hard time saving all of the wheat with the combine.

The field work on the station the past week has consisted chiefly of straightening and rebuilding line fences.

The field corn and beans seeded on May 15 emerged May 31 with good stands. Warm weather will be necessary to secure a good growth of corn and beans. In the variety trials six varieties each of corn and beans were seeded. A date of seeding experiment with beans, seeding at weekly intervals, is being conducted.

The early varieties of field peas are in bloom. The field peas do not look very promising this year, as the growth is small and the vines do not have a healthy thrifty appearance. The peas were seeded in drills six inches apart and in double rows three feet apart. The alfalfa varieties seeded this spring are making a good growth. A few farmers are now cutting their first crop of alfalfa.

HAVRE:

The weather during the last week has not been very favorable for crop growth. There has been practically no precipitation with a very strong east wind on May 27, 28, and 29. On the 28th the average for the 24 hours was 20.1 miles per hour, which is the highest wind velocity recorded at this station for a 24-hour period. Evaporation also ran unusually high for this season of the year.

All crops that are advanced are suffering from drought. Winter rye is well headed out and nearing the bloom stage. The lower leaves are firing. All domestic grasses and alfalfa in close drills have suffered. It will be necessary to cut most of the alfalfa that was burned in the near future.

Havre, continued:

Winter wheat is very weedy, so much so that it is doubtful if many of the plots can be harvested. Good stands of flax have been secured. Corn is emerging with good stands.

Mr. J. M. Stephens was at the station on the 25th and 26th. Maximum temperature 80; minimum 35; precipitation, .16 inch.

HUNTLEY:

Fairly high temperatures and daily drying winds have caused some injury to all small grain crops. Spring grains on fallow show more or less tip injury, and on other tillage methods the grain leaves are curling up as a result of drought.

Stands of corn and beans are slowly improving but most plots still present a ragged appearance. Sudan grass and sorgo planted a week ago is beginning to come up.

Field work has consisted of plowing and cultivating fallow plots; plowing under rye for green manure, and cultivating roads and alleys.

Mr. J. M. Stephens spent May 29 and 30 at this station. Maximum temperature 88; minimum 33; precipitation, trace.

SHERIDAN:

Considerably warmer weather prevailed over the most of the week, with no precipitation. From the morning of the 28th to the evening of the 30th the wind velocity also was the highest recorded for a 24-hour period at this station, averaging about 25 miles an hour on the 2-foot anemometer for that period. Alfalfa on the level ground where there is a fair stand seeded solid continued to fire badly throughout the week. Rows and solid seedings where the stand is thin, or in low spots, still continue in fair condition. Brome shows about the same condition as alfalfa. Condition of other crops still appears to be fair, although growth still continues to be slow. Flax, however, appears to have the best start of any season within the past ten years.

Sheridan, continued:

Corn in the rotations, varieties, and pastures emerged during the week and was harrowed. All seedings were completed except for late plantings of flax, corn, and potatoes.

Winter rye is now fully headed.
Maximum temperature 84; minimum 35; precipitation, none.

MANDAN:

Agronomy

The past week has been favorable for field work. High winds prevailed on two or three days. Several nights and days were cool for this time of year.

Forage crops have been seeded in the South field and land prepared for seeding them in field M. This work was delayed until the past week.

Small grain is making a good growth at the present time. Corn is practically all up.

The total rainfall for May to date is 2.23 inches. There was no rain during the past two weeks.
Maximum temperature 84; minimum 35; precipitation, none.

Cooperative Grazing Experiment

The cattle appear to be doing well on their pastures. Grass is in good condition for grazing. Brome-grass especially is in excellent condition for grazing.

Arboriculture

Cultivation of testing blocks and main station windbreak was completed during the week.

Twenty-four pounds of American elm seed have been picked from trees on the station grounds. Twenty pounds of Chinese elm seed have been picked from trees in the main windbreak.

Mandan, continued:

Arboriculture, continued

Hoeing has commenced in the pure plantings of Northwest poplar, Acute-leaf willow and Green ash.

BELLE FOURCHE:

With the exception of one hot day, the week has been fairly moderate in temperature, but climatic conditions as a whole were unfavorable to crops. No precipitation was received, and high winds nearly every day have caused an excessive amount of evaporation. The soil is becoming very dry, and most of the crops are beginning to suffer from lack of moisture.

Flax, young alfalfa, and sweet clover have made a good growth, but development of practically all other crops has been unfavorably affected by the dry weather. Fall grain, early seeded spring small grain, and brome-grass are beginning to burn. Alfalfa was burned beyond recovery and was harvested. Corn is up with good stands on all plots.

Field work has included the trimming of plots, duckfooting of roadways, and plowing, disking, and harrowing of fallow plots.
Maximum temperature 90; minimum 44; precipitation, none.

ARDMORE:

The weather during the first part of the week was warm, but unseasonably cold weather prevailed during the last few days. No precipitation of any value was received.

Alfalfa has ceased growth and commenced to fire. It must be cut immediately if it is to be saved. Grain crops have made excellent growth and have shown no sign of drought damage, though they have little reserve moisture.

Ardmore, continued:

The sorgo and beans in the rotations and variety tests were planted during the week. Corn is up to a good stand on all except the listed plots and fields.

The precipitation for the year to date compared with the average is as follows:

	Jan.	Feb.	March	Apr.	May
18-year average	.35	.36	.66	2.06	2.85
1930	.36	.18	.37	1.93	2.56

The deficiency to date is .88 inch.

Maximum temperature 88; minimum 46; precipitation, .01 inch.

ARCHER:

During the fore part of the week the weather permitted field work, but during the last half weather conditions made it necessary to discontinue field operations. On May 28, 29, and 30 heavy fogs and mists prevailed. At times the mist approached rain. The precipitation during this period totaled .22 inch.

Work at the station consisted of seeding the remainder of the corn on the rotation plots, planting potatoes and beans, and seeding the varieties of corn. The hauling of manure, soil and gravel has also been in progress.

Corn seeded previous to May 14 on fall plowed and duckfooted land was in bad shape before the three days of mist. The soil on these plots, due to excessive moisture, had baked and become very hard. The moisture softened the crust and blind cultivation is in progress to prevent the soil from becoming hard. Other crops are growing rather slowly but the pastures are better than they have been for a number of years.

Maximum temperature 79; minimum 40; precipitation, .22 inch.

AKRON:

Warm temperatures during the early part of the week brought out the first active growth of the spring-sown small grains. Winter wheat also took on a deeper green color and is now much more uniform in color and in height than at any previous time this spring. The spring sown small grains do not yet hide the ground, and winter wheat is jointing at about knee high. Early Blackhull winter wheat in the variety experiment is heading.

The middle of the week witnessed some damp, foggy weather during which time fires were necessary for comfort inside buildings.

Yesterday, May 30, and to-day a hard south wind has prevailed To-day at about three o'clock in the afternoon this wind became quite vicious in its intensity. Current talk in Akron is that listed corn on the sandy land has been leveled so that replanting will be necessary. Some blowing is taking place on the hard lands in the vicinity of the station.

Work of the week consisted of cultivating all roadways and open ground not yet seeded, seeding Sudan grass on the hog pastures across the railroad, disking the rotation stubble plots intended for fallow, disking ground for corn variety experiment, listing-in of the silage corn, and such inside jobs as hand picking the grain millets. The foggy, damp weather interfered with the completion of the row crop seeding, which will of necessity be held over until next week. The second date of seeding beans was made to-day. Rotation alleys and the orchards are also being cultivated to-day.

Dr. D. W. Robertson, Mr. R. F. Hawkinsmith, and Mr. Wayne Austin, from the Agricultural College, visited the station Friday, May 30. Mr. Austin will remain during the summer to aid with the cereal experimental work.

Maximum temperature 86; minimum 42; precipitation, .33 inch.

NORTH PLATTE:

Some unusual weather contrasts have occurred during the week, with cloudiness and low temperatures predominating. A maximum temperature of 90 degrees occurred on the 26th, which was reported here to be the maximum for the United States for that day. A violent electric storm bringing 1.30 inches of rain occurred on the night of the 27th. Low temperatures have prevailed since.

Very little corn has emerged. Some replanting is in progress.

A delegation of about 100 Dawson County Farmers visited the station on Wednesday, May 28. The field roads were too wet to permit travel so that these visitors had to be entertained at the buildings.

COLBY:

This has been a week of varied weather. The fore part of the week was rather hot and dry, Thursday and Friday, May 29 and 30, were cloudy and damp, while Saturday was very windy, ending with a shower toward mid-night. The almost annual Decoration Day rain netted only .04 inch. The last half of the week was cold.

The drying weather during the fore part of the week dried out the surface soil so that corn that had been planted before the rains did not come very well on account of the hard crust that had formed. Crops planted after the rains are coming slowly in some cases because the seed-bed has dried out since planting. The shower of last night should help germination considerably.

The corn on the station is just breaking through, as are also the beans. The winter wheat is heading. A number of the plots are fully headed. The station summer-fallow plots and fields are the marvel of all visitors. The growth is thick and rank. It is not believed that the summer fallow wheat has ever looked better. During the drizzly weather preceding Decoration Day, patches here and there began to lodge.

Maximum temperature 87; minimum 48; precipitation, .39 inch.
Weather for May: Maximum temperature 89; minimum 32;
precipitation, 5.11 inches, normal precipitation, 2.43 inches.
Precipitation January 1 to June 1, 1930, 8.12 inches, normal 6.35 in.

GARDEN CITY:

Planting of all row crops was finished to-day, May 31, with the exception of late planting of some crops which are not planted until about the middle of June. Ground was in excellent condition for planting with abundance of moisture within two inches of the surface.

On Wednesday, May 28, .79 inch of rain fell in about an hour. Run-off was rather heavy. However, a lot of moisture was added to the ground. Wheat was needing moisture badly. All wheat plots are fully headed now. Some are showing serious lack of sufficient moisture to keep the leaves and plant green. At this time it looks as if some of the wheat would ripen much earlier than usual, due to lack of sufficient moisture in the sub-soil at this stage of maturity.

Maximum temperature 92; minimum 47; precipitation, .79 inch.

TUCUMCARI:

The week has been characterized by cool, cloudy weather and by rather high wind much of the time. While rain has threatened almost continually, only .21 inch was received. This brings the total for the first five months of 1930 to 1.04 inches. No field work was possible, and, in fact, practically no field work has been performed since some listing was done in April. Ranges are very short and livestock in poorer condition than during the most severe winter weather.

Professor E. C. Chilcott visited the station Wednesday, May 28, arriving from Woodward, and left Thursday morning, May 29, for Dalhart en route to Pendleton, Oregon.

Maximum temperature 88; minimum 42; evaporation, 1.887 inches.

Wind velocity, 7.2 miles per hour.

DALHART:

Weather conditions have remained rather cool, but with a drying wind much of the time. The total rainfall for the month to date has been 1.50 inches. This all came the first of the month. Oats and barley are fast drying up except on fallow and early fall plowed. Winter wheat and rye continue to fill normally. Winter wheat and rye have shown very little effect of the continued dry

Dalhart, continued:

weather. This is quite likely due to the fact that stands are thin except where there was moisture stored in the soil previous to seeding. Winter wheat on fallow continues to promise a good yield.

Cotton seeded on May 20 has emerged to stands. The fourth date of seeding cotton was made to-day, May 31. The May 15 date of seeding sorghums are showing sufficient stands for each of the 31 varieties to permit thinning to comparable stands. Corn varieties and plots are likewise showing excellent emergence. Soybeans seeded a week ago to-day are starting emergence. A rabbit-proof fence has been built around all soybean and peanut plots.

Native sod is fast drying up. Watering of trees and shrubs planted this spring was necessary during the week.

While no rain has been received near the station lately, listing of corn and sorghums is continuing. Undoubtedly poor stands will result.

Professor E. C. Chilcott visited the station Thursday, May 29.
Maximum temperature 88; minimum 45; precipitation, none.
Wind velocity, 8.5 miles per hour; evaporation, 2.226 inches.

BIG SPRING:

Farming conditions in general have been greatly improved by a slow rain during the past week. A slow drizzle started on the afternoon of May 28. This rain continued with varying degrees of intensity until the morning of May 30. During this time 1.49 inches fell, all of which soaked into the soil with no run-off or soil washing taking place.

This rain came at a very opportune time, as many of the farmers had stopped planting because of dry soil, and those who were continuing to plant had very poor prospects of getting stands with the moisture they had in the soil. Conditions are such now that good stands should be obtained from seed that has been planted, and also that which is to be planted during the coming week.

Big Spring, continued:

Station cotton in the rotations and also that in the varieties is starting to emerge and should be up to good stands within the next few days. An increase field of Sudan and Hegari are now up to good stands.

Station work, during the first half of the week, consisted of planting cowpeas in the rotations and the varieties, soybeans in the variety test, corn, and broomcorn in the rotations. Since the rain, grinding feed, hoeing weeds, and plowing roadways have occupied the time of the station force.

Maximum temperature 85; minimum 54; precipitation, 1.49 inches.

LAWTON:

Weather conditions the past week have been favorable to the growth and development of small grains and permitted the execution of field work without interruption. A local shower of .15 inch was recorded on the 28th. Temperatures have been generally quite cool, especially at night. The maximum temperatures have ranged from 76 to 86, and the minimum varied from 51 to 62. The total precipitation for May amounted to 5.75 inches, which is only .59 inch above normal.

Good stands of cotton were obtained on all recent plantings made on the station, but temperatures are entirely too cool to permit a healthy condition of the young plants, or allow much rapidity of growth.

Cowpeas constitute the only crop that resulted in poor stands so far. This condition seems to be due to a rather poor quality of seed and a crusted surface soil.

A second planting of the chinch bug sorghum resistance project was made May 30. Seven varieties of cotton were also planted in the date test at that time. Twenty varieties of soybeans were planted May 27.

Lawton, continued:

Oats heads are turning to quite a marked extent and maturity will likely be at about normal date. Wheat heads are still green. The plants are not strong, and, due to the heavy infestation of leaf rust, the leaf area presents a burned appearance. If cool weather continues maturity will be much later than normal. In the presence of hot, windy weather the maturity is likely to be abnormally quick.

Mr. Karl Quisenberry, of the Office of Cereal Crops and Diseases, visited the station May 30 and 31.

WOODWARD:

The past week has been the first full week without rain since April 21. Much was accomplished at freeing the station of weeds, preparatory to planting row crops.

A fight is being waged against "damping off" which is killing many of seedling pines from seed planted this spring.

A large number of Chinese arborvitae cuttings were made and placed in the greenhouse and in hotbeds in the field.

Farmers are becoming more confident that a yield of wheat not greatly below average may be expected, as heads appear to be filling exceptionally well.

Visitors for the week were Dr. Karl S. Quisenberry, Dr. A. G. Johnson, Dr. Hurley Fellows, and Mr. C. O. Johnston, all of the Office of Cereal Crops & Diseases.
Maximum temperature 91; minimum 49.